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A.D. 1865, *2nd MARCH.* N<sup>o</sup> 591.

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S P E C I F I C A T I O N

OF

CHARLES RAHN.

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DEFLECTORS FOR SURGICAL PURPOSES.

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LONDON:

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A.D. 1865, 2nd MARCH. N° 591.

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**Reflectors for Surgical Purposes.**

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**LETTERS PATENT** to Charles Rahn, of 29, Brook Street, Grosvenor Square, in the County of Middlesex, Dentist, for the Invention of “**AN IMPROVED INSTRUMENT FOR CONCENTRATING LIGHT, APPLICABLE TO DENTAL, SURGICAL, AND OTHER OPERATIONS.**”

Sealed the 29th August 1865, and dated the 2nd March 1865.

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**PROVISIONAL SPECIFICATION** left by the said Charles Rahn at the Office of the Commissioners of Patents, with his Petition, on the 2nd March 1865.

I, CHARLES RAHN, of 29, Brook Street, Grosvenor Square, in the County of Middlesex, Dentist, do hereby declare the nature of the said Invention for “**AN IMPROVED INSTRUMENT FOR CONCENTRATING LIGHT, APPLICABLE TO DENTAL, SURGICAL, AND OTHER OPERATIONS,**” to be as follows:—

My improved instrument is intended for concentrating and intensifying direct light from a lamp, gas flame, or other source of artificial light for dental, surgical, and other operations. The effect of this instrument is to direct an intense light upon a given spot, and to limit the area of illumination to that spot.

My improved instrument is constructed as hereafter explained. I employ a combination of lenses, comprising a condensing lens and two double convex lenses, the foci of which are arranged to accord with the distance required by the operator from the patient.

I fit this combination of lenses into a cone with draw tubes, having a rack and pinion adjustment carried by a plate made slide to slide in dovetails. This plate is furnished with racks, pinions, and nurlled screw nuts for adjustment, to enable the plate carrying the cone and draw tubes to be raised or depressed at



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*Rahn's Improved Reflector for Surgical Purposes.*

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pleasure upon a plate made to form a screen, and jointed to a foot or stand. This plate is capable of adjustment by a tangent screw and nurlled nut to obtain any angle of elevation or depression that may be desired.

The light may be either disconnected or it may be fixed to the instrument with any well-known means of adjustment.

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Charles Rahn in the Great Seal Patent Office on the 1st September 1865.

**TO ALL TO WHOM THESE PRESENTS SHALL COME**, I, CHARLES RAHN, of 29, Brook Street, Grosvenor Square, in the County of Middlesex, 10 Dentist, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Second day of March, in the year of our Lord One thousand eight hundred and sixty-five, in the twenty-eighth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the 15 said Charles Rahn, Her special licence that I, the said Charles Rahn, my executors, administrators, and assigns, or such others as I, the said Charles Rahn, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, 20 and vend within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for “**AN IMPROVED INSTRUMENT FOR CONCENTRATING LIGHT, APPLICABLE TO DENTAL, SURGICAL, AND OTHER OPERATIONS,**” upon the condition (amongst others) that I, the said Charles Rahn, my executors or administrators, by an instrument in writing under 25 my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

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**NOW KNOW YE**, that I, the said Charles Rahn, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, reference being had to the Drawing hereunto annexed, that is to say :—

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My improved instrument is intended for concentrating and intensifying direct light from a lamp, gas flame, or other source of artificial light for dental,



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*Rahn's Improved Reflector for Surgical Purposes.*

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surgical, and other operations. The effect of this instrument is to direct an intense light upon a given spot, and to limit the area of illumination to that spot.

My improved instrument is constructed as hereafter explained and shown  
5 in the accompanying Drawing, which is a perspective view. I employ a combination of lenses, comprising a condensing lens and two double convex lenses, the foci of which are arranged to accord with the distance required by the operator from the patient.

I fit this combination of lenses into a cone *a* with draw tubes *b*, having a  
10 rack-and-pinion adjustment *c* carried by a plate *d* made to slide in dovetails. This plate is furnished with racks *e, e*, pinions and milled head nuts *f, f*, for adjustment to enable the plate *d* carrying the cone and draw tubes to be raised and lowered at pleasure upon a plate *g* made to form a screen, and jointed to a foot or stand *h*. This plate is capable of adjustment by a tangent  
15 screw and milled head nut *i*, to obtain any angle of elevation or depression that may be desired.

The light may be either disconnected or it may be fixed to the instrument with any well-known means of adjustment.

In the Drawing I have shewn a gas burner connected to a vertical bar *j* by  
20 an adjustable collar and nut *k*, up and down which the light may be moved as required; the lower part of the bar *j* is formed with a collar and screw nut, working on a horizontal bar *l*, to enable the light to be secured at any desired distance from the plate *d*.

And having now described the nature of my said Invention, and in what  
25 manner the same is to be performed, I declare that I claim the improved instrument for concentrating light, applicable to dental, surgical, and other operations, constructed substantially in manner herein-before described.

In witness whereof, I, the said Charles Rahn, have hereunto set my  
hand and seal, this First day of September, One thousand eight  
30 hundred and sixty-five.

CHAS. RAHN. (L.S.)

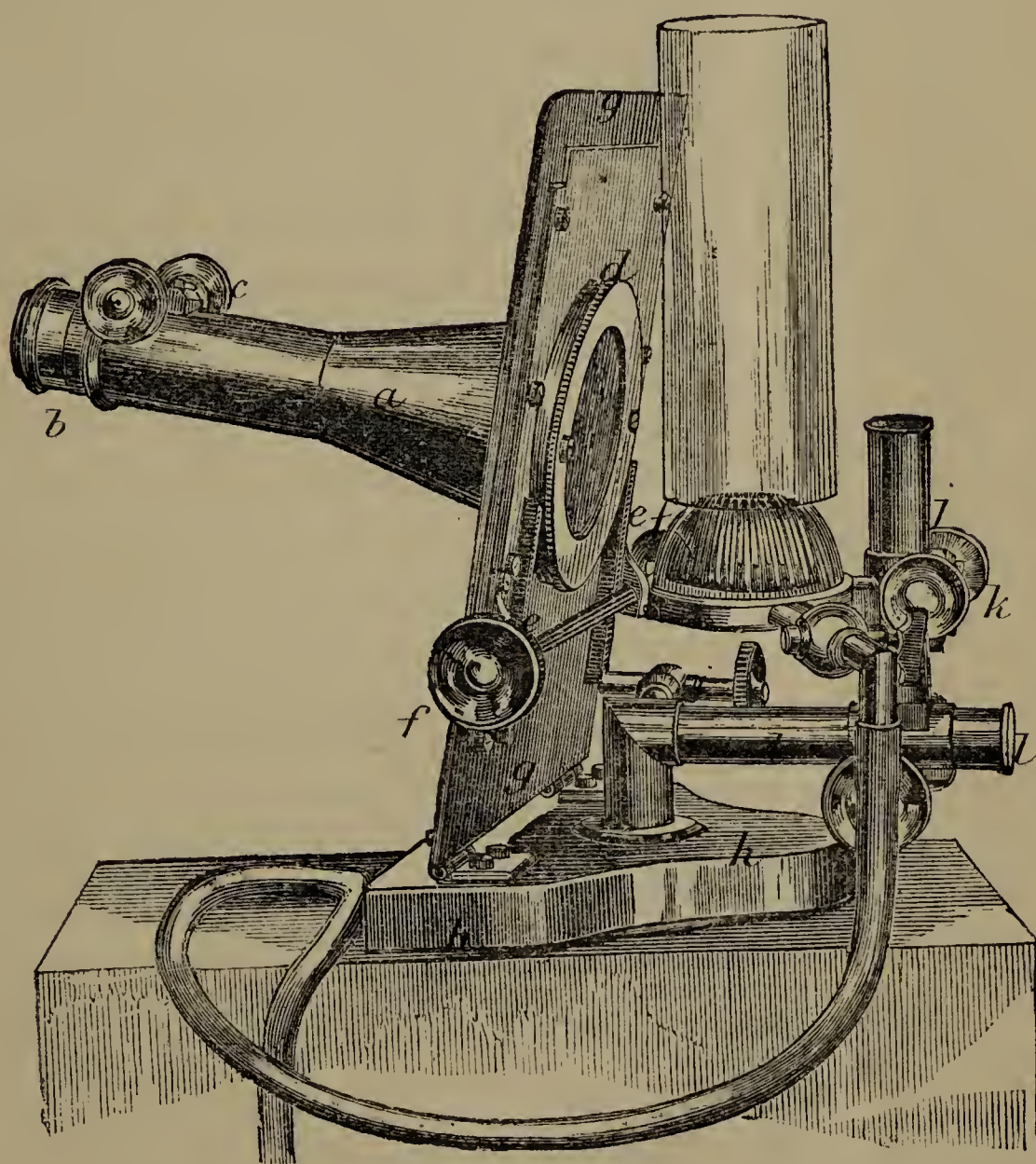
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*The filed drawing is not colored*

Drawn on Stone by Malby & Sons.

